IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA,
INDIANAPOLIS DIVISION

UNITED STATES OF AMERICA, *ex rel.* THOMAS McARTOR and KEITH RAMSEY,	)	
Relators/Plaintiffs,	)	No. 1:08 Civ. 0133 (WTL) (MJD)
v.	)	AMENDED COMPLAINT
ROLLS-ROYCE CORPORATION,	)	
Defendant.	)	Jury Trial Demanded

AMENDED COMPLAINT

Now comes the United States of America on relation of Thomas McArtor and Keith Ramsey, and complains against Defendant Rolls-Royce Corporation ("RRC") as follows:

INTRODUCTION

1. When the United States Department of Defense ("DoD") engages in procurements for airplane engines and parts, its willingness to purchase and the price it will pay depend on the products' specifications. For example, DoD's contracts specify each engine's dimensions, thrust characteristics, and altitude tolerance, to name but a few requirements. Given the mission critical nature of aircraft engines, and the potentially catastrophic consequences of defects, DoD contracts also specify the quality control requirements that a manufacturer must meet. These requirements encompass design methodology, inspection, testing, and the process for addressing defects should they occur.

2. DoD quality control requirements are comprehensive. They take time to perform and add significant expense to the manufacturing process. Nevertheless, the time and cost is

necessary to ensure that the end product is free of defects before it enters service. DoD, like most aircraft customers, is not willing to risk defective engines.

3. In particular, DoD requires aerospace manufacturers to follow a written quality management system that conforms to generally accepted standards. To be eligible for a DoD contract, the manufacturer must submit its quality management system to DoD for approval. Contracts awarded after approval incorporate compliance with the approved system as a material term. Further, when delivering each individual engine and part sold under the contract, DoD requires the manufacturer to certify that the item was manufactured in accordance with the contractual requirements.

4. Relators, Thomas McArtor and Keith Ramsey, bring this case because they worked for an aerospace manufacturer that cut corners on quality control requirements and lied to DoD about its procedures. The two men have no connection to one another: Relator McArtor worked in RRC's quality assurance department and was the plant's chief Federal Aviation Administration ("FAA") designated Airworthiness Representative, while Relator Ramsey was a senior quality engineer who worked under RRC manufacturing managers. Until recently, they each had no knowledge that the other even existed. Nevertheless, both men observed how Defendant Rolls Royce Corporation engaged in systemic violations of its government-approved quality management system and its DoD contractual requirements.

5. Relators McArtor and Ramsey observed that RRC did not conduct some of the aerospace industry's most basic and necessary quality controls. For example, Relator McArtor learned in September 2006 of a scheme RRC management developed to allow the shipment of several civilian and military aircraft engines that it knew contained compressor blades which had

previously been designated as scrap, for experimental use only, because the blades had failed to meet specifications. McArtor attempted to stop the scheme but was placed on administrative leave before it was resolved. Relator Ramsey, meanwhile, found that RRC so routinely used defective parts designated as "scrap only" in production engines that he eventually began instructing his quality inspectors to take a hammer to scrap parts and material to ensure that they would not be used.

6. These instances, and the many other violations Relators observed, involved proprietary military products as well as "dual use" systems, *i.e.*, engine systems that are manufactured for both the military and civilian markets. For example, the manufacturing violations at issue in this case affected the Rolls Royce Model 250, AE2100 and AE3007 engines, among others. These engines are installed in both civilian and military aircraft, including, for example, civilian Bell and McDonnell Douglas helicopters, and Saab 2000, Embraer and Cessna Citation jet aircrafts, as well as the military's C130J Super Hercules, RQ-4 Global Hawk, and Kiowa Warrior and MH-6 Little Bird helicopters. The violations also involved the T56, AE1107 and Joint Strike Fighter Liftfan, which are engines used solely on military aircraft.

7. When these two men complained to their respective supervisors that the company was risking lives and pawning-off untested and non-conforming products on the government, they were both told the same party line: that Rolls Royce manufacturing is so good that the company could skip the required quality checks and could thereby speed production and save money. In short, RRC's manufacturing managers believed that the quality control rules were

necessary only for "lesser" companies, and that adherence to the regulations was beneath Rolls Royce.

8. This approach to quality management was not only arrogant, it was dead wrong. As RRC cut corners on its quality control obligations its defect rate skyrocketed. Since 2003, RRC has experienced a whopping defect rate more than 300 times greater than the Six Sigma "gold" standard for quality.

9. Worse, many of these defective products were released into the field, a serious manufacturing and quality lapse known as a "quality escape." Quality escapes are intolerable in the aerospace industry because of the risk to human life when defects enter the field. Accordingly, the benchmark aerospace quality management standard, AS9100, as well as DoD and commercial contractual terms, require manufacturers to inform potentially affected customers of all quality escapes.

10. Under these requirements the manufacturer must determine the universe of effected customers (*e.g.*, by part number, serial number, lot number or batch) and inform them of the quality escape regardless of the perceived severity of the defect. Typically, manufacturers have to pay compensation to these customers and/or provide a replacement when they report a quality escape.

11. RRC approached quality escapes with the same arrogance as the other quality control requirements. Believing that RRC was expert enough to be the final judge of safety concerns, RRC decided not to report quality escapes if its management determined that the defective item could be used "as is" in the field, despite the legal and contractual requirement to report all escapes. Accordingly, RRC began a new process which involved keeping a secret set

of books for quality escapes that the managers believed could operate "as is" in the field. It labeled these escapes "Records Only Material Review Board (MRB)." RRC never reported the Records Only MRB defects to its customers and it kept the Record Only MRBs hidden from government auditors that periodically reviewed its quality control documentation.

12. For example, following the unsealing of this case in November 2010, two separate helicopter companies with lawsuits against RRC involving failed RRC engines resulting in crashes have sought to depose Relator McArtor concerning, among other things, the Records Only MRB system: Winward Aviation, Inc., et al. v. Rolls-Royce Corporation, Second Circuit Court of Hawaii, Docket No. 10-1-0520; PHI, Inc. v. Rolls-Royce Corporation, United States District Court for the Western District of Louisiana, Docket No. 6:08 Civ. 1406. The fact that one of these cases has been going on for almost two and a half years without RRC disclosing its use of the Records Only MRB demonstrates the pervasiveness of RRC's campaign to conceal quality escapes from its customers.

13. Thousands of engines in military aircraft are potentially affected, including the F-35 Joint Strike Fighter, V22 Osprey, C130 Hercules and C130J Super Hercules transports, Kiowa Warrior and MH-6 Little Bird helicopters, RQ-4 Global Hawk, E2 Hawkeye and P3 Orion. The same is true for dual use civilian aircraft. The affected civilian aircraft include the Saab 2000, Embraer and Cessna Citation X jet aircraft, as well as numerous models and series of Bell, Eurocopter, McDonell Douglas and Schweizer/Sikorsky helicopters, and many others.

14. Although the military publishes limited information about aircraft crashes, public records show that there have been at least nine non-combat accidents since 2002 involving the failure of RRC engines in military aircraft. These resulted in at least five fatalities of American

military personnel. With regard to commercial aircraft, the National Transportation Safety Board ("NTSB") investigates each crash or accident and, when an incident is determined to have resulted from a defect in the aircraft rather than pilot error, the FAA will normally issue an Airworthiness Directive to identify the failure and provide information concerning its impact and scope. Since 2002, RRC dual-use engines, used also in military aircraft as discussed above, have been the subject of 63 NTSB investigations and have been the subject of 16 different FAA Airworthiness Directives documenting "unsafe conditions" that potentially impacted thousands of aircraft engines.

15. Both Mr. McArtor and Mr. Ramsey were terminated for documenting the company's various violations. Each of them now brings this case, under the *qui tam* whistleblower provisions of the federal False Claims Act, 31 U.S.C. § 3729 *et seq.* Pursuant to that statute and applicable case law, RRC is liable to the United States for treble damages and penalties for each false claim, and other damages.

PARTIES AND OTHER RELEVANT PERSONS

16. Relator Thomas McArtor ("McArtor") is a quality control professional with over 20 years of experience in the aerospace industry. He has a Bachelor of Science Degree in Quality Control Engineering from Kennedy-Western University. From 1986 to 1994, McArtor was an Advanced Quality System Engineer for Parker Hannifin Aerospace Group. From 1994 until 2006 McArtor worked for RRC, its affiliates, and predecessors-in-interest serving in its Indianapolis manufacturing facility as a Regulatory Compliance Specialist, Senior Manager of Quality Assurance, and as the Organizational Designated Airworthiness Representative ("ODAR") Coordinator. From these positions, McArtor has personal knowledge of RRC's

quality assurance obligations and its failure to comply with them, as well as its practices with respect to returned and defective products, among other matters. In September 2006, McArtor was forced out of RRC due to his investigation and reporting – both internally and to government officials – of fraudulent conduct alleged herein.

17. Relator Keith Ramsey ("Ramsey") is a quality control professional with over 25 years of experience as a manufacturing and quality engineer for complex industrial processes. He is an American Society of Quality-certified Quality Auditor and a registered Quality Engineer. He has a Bachelor of Science degree in Automotive Industrial Technology from Utah State University and a Master of Science degree in Technology Management for Quality Systems from the University of Denver. He has served as an Adjunct Professor at Ivy Tech State College, ITT College and Stevens Henager College since 1997 teaching, among other things, Mathematics and Quality Systems. From 1983 to 1995 Ramsey worked as a Senior Manufacturing Engineer in the Space Shuttle Division of Thiokol Corporation, and then spent six years working as a Senior Manufacturing and Quality Engineer in the automotive industry, before starting at RRC in 2000. He worked in RRC's Indianapolis manufacturing facility as a consultant from July 2000 to August 2002; he then became a full-time employee of RRC, serving as a Quality Engineer, from August 2002 to March 2006. As a Quality Engineer, Ramsey oversaw numerous stages of RRC's manufacturing process. From this position, Ramsey has personal knowledge of RRC's quality assurance obligations and its failure to comply with them, including specific actions taken in order to circumvent manufacturing inspections required as part of its quality control obligations. In March 2006, RRC fired Ramsey for refusing to

cooperate in RRC's knowing deviations from its quality control plan, and for reporting to RRC management the fraudulent conduct alleged herein.

18. Defendant Rolls-Royce Corporation is a manufacturer of aircraft engines and parts sold for use in commercial and military airplanes and helicopters. RRC is a Delaware corporation with its principal place of business located in Indianapolis, Indiana. RRC operates design and production facilities in Indianapolis, Indiana that design and manufacture engines and spare parts for military and civilian aircraft. In 1995, Rolls Royce North America purchased Allison Engine Company. RRC is the resulting company and it became the successor in interest to Allison Engine Company in 2000. With approximately 4,000 employees, RRC is the primary operating entity of Rolls Royce North America, which is under the operation and control of Rolls Royce Group plc, the parent company headquartered in the City of Westminster, London, United Kingdom.

19. RRC manufactures a number of different engines used in United States military aircraft. Engines used in military aircraft manufactured exclusively at RRC's Indianapolis facility include the following: RRC's Liftfan engine, used in the military's F-35 Joint Strike Fighter; the AE1107 engine, used in the V22 Osprey; the AE2100 engine, used in the C130J Super Hercules transport; the Model 250 engine, used in the Kiowa Warrior and MH-6 Little Bird helicopters; the AE 3007 engine, used in the RQ-4 Global Hawk; and the T56 engine, used in the E2 Hawkeye and P3 Orion. RRC's revenues at the Indianapolis facility exceed $1.5 billion per year. RRC has entered into hundreds of contracts with DoD since 2002, including approximately 180 contracts, or modifications or extensions thereof, from 2003 through 2006.

20. In or around March 2004, Steve Dwyer ("Dwyer") became the Chief Operating Officer ("COO") of RRC's Indianapolis facility. Thomas Loehr became the Vice President ("VP") of Finance at about the same time. Soon thereafter, Dwyer brought in William Kleiner ("Kleiner") to oversee the quality function for all engine design, manufacturing and servicing at the Indianapolis plant; Kleiner was officially given the title of VP of Quality in or around April 2005. McArtor reported directly to Kleiner, who reported to Dwyer.

21. Relator Ramsey reported to Jack Reismiller ("Reismiller"), a Manager of Quality at Plant 5 of the Indianapolis facility. In or around 2004, RRC promoted Reismiller to Director of Operations-Quality, and brought in James Leonard ("Leonard") as the new Manager of Quality. Reismiller's and Leonard's positions were within the Operations department; they did not work in an independent quality department. Reismiller reported to John Gallo ("Gallo"), VP of Operations for the Indianapolis plant, and COO Dwyer. After Reismiller was promoted and Leonard was brought in, Ramsey reported directly to Leonard, who reported to Reismiller.

22. Kleiner and Reismiller were part of an anti-whistleblower culture within RRC's management. They threatened McArtor and Ramsey, respectively, for raising concerns about RRC's quality control failures and McArtor and Ramsey were each subsequently fired after raising such concerns and refusing to participate in RRC's fraudulent conduct. Many other RRC employees, including Larry Miller, an Internal Quality Auditor, Sally Randall, the Director of Quality Assurance, and David Talcott, a Senior Quality Engineer, were also victims of the company's anti-whistleblower culture. These employees lost their jobs and/or suffered demotions after raising quality concerns.

JURISDICTION AND VENUE

23. The Court has jurisdiction of Relators' federal False Claims Act claims pursuant to 28 U.S.C. § 1331 and 31 U.S.C. § 3730. The claims in this suit are not based upon the public disclosure of allegations or transactions in a criminal, civil or administrative hearing, in a congressional, administrative or General Accounting Office report, hearing, audit or investigation, or the news media.

24. Further, Relators McArtor and Ramsey have direct and independent knowledge of the information on which the allegations are based and they voluntarily provided the information to the Government before filing these claims.

25. Venue is proper pursuant to 31 U.S.C. § 3732. Defendant RRC transacts business in this judicial district and the claims are based on events that occurred in this judicial district.

26. The Court has jurisdiction of McArtor's Indiana common law retaliatory discharge claim pursuant to 28 U.S.C. § 1367.

FACTS

I. DoD Quality Control Requirements for Aircraft Engines and Parts

27. Engines and engine parts sold to the United States for use in military aircraft are complex, highly-technical products involving complicated manufacturing processes. Precision in design and production are critical. Detailed instructions govern the sequence of work, product requirements such as size and dimensions, and process requirements such as temperature, pressure, etc. Deviations from these specifications increase the risk of defective parts and engine failures and can violate legal and contractual requirements for these products.

28. Accordingly, DoD requires manufacturers of aircraft engines and parts to meet specific quality assurance requirements. See, e.g., 48 C.F.R. §§ 52.246-1 through 52.246-24; 209.270; 246.202-4; 246.408-71, 252.246-7000. These requirements are incorporated into the contracts between RRC and the United States through correspondingly-numbered provisions of the Federal Acquisition Regulations ("FAR") and Federal Defense Acquisition Regulations Supplement ("DFARS").

A. The Quality Assurance Plan

29. Pursuant to the FAR and DFARS, manufacturers must submit a comprehensive, written Quality Assurance Plan ("QAP" or "Plan") to DoD and obtain its approval of the Plan as a prerequisite to receiving a contract award. See 48 CFR § 209.270-4; DFARS 209.202, 270-1, -4. Once DoD approves the QAP, it becomes part of the manufacturer's contract. The manufacturer must then adhere to its QAP and document its adherence accurately and completely. See 48 CFR §§ 46.105(a), 46.202-3(b); FAR 46.105(a), 46.202-3(b). This documentation is a material requirement and government auditors rely on the manufacturer's documentation when monitoring contract compliance.

30. Because of the complex and mission critical nature of aircraft engines and parts, manufacturers of certain products are required to meet even higher quality control standards. See DFARS 246.202-4; FAR 46.202-4, 46.203. The QAPs must meet internationally-accepted standards such as International Organization for Standardization 9001 ("ISO9001") and Aerospace Standards 9100 *et seq*. ("AS9100"), and, in some instances, the government will not approve a manufacturer's QAP unless it obtains third-party certification that its quality

requirements and practices meet the higher-level standards. See 48 C.F.R. §§ 46.202-4, 46.311 (entitled "Higher-Level Contract Quality Requirement"); FAR 46.202-4.

31. AS9100 is a rigorous, third-party standard for quality assurance procedures in the aerospace industry. AS9100 incorporates – and largely mirrors – ISO9001 quality control system requirements, a certification standard applied to the manufacture of complex industrial products, and includes requirements applied specifically to the aerospace industry. See AS9100B, Section 1.1.

B. Allison Engine's QAP

32. After Rolls Royce acquired Allison Engine, RRC operated under Allison's DoD-approved QAP. Allison, formerly owned by General Motors, did not maintain a QAP that met the AS9100 quality standards unique to the aerospace industry, which limited RRC's ability to obtain DoD contracts for aircraft engines.

33. In 2000, Rolls Royce Group Plc began integrating RRC into its global operations, including the Rolls Royce global quality control processes and procedures. RRC created a new QAP called the Quality Management System (or "QMS") that essentially tracked Rolls Royce's global quality procedures. Management at RRC and Rolls Royce Plc decided to incorporate into RRC's QMS the AS9100 higher-level quality requirements, the most stringent quality standard in aerospace manufacturing. RRC could then tout its purported adherence to that rigorous standard to obtain more DoD contracts. To that end, RRC also began the process of obtaining third-party certification that its QMS met higher-level quality standards.

34. RRC obtained third-party certification that the QMS met higher-level quality standards in 2002 and the Defense Contract Management Agency ("DCMA"), the DoD agency

responsible for overseeing RRC's military contracts, approved the QMS that same year. By submitting its QMS to DCMA and obtaining its approval, RRC represented that its quality practices adhered to its QMS and the AS9100 standard incorporated therein. RRC then began using its certification and the approval of its QMS to increase its DoD contracts. However, as is explained in greater detail below, RRC's management was not genuinely interested in living up to the higher-level quality requirements, and they abandoned compliance shortly after obtaining third party certification and the government's approval of its QMS. Indeed, just between 2003 and 2006, RRC entered into approximately 180 different contracts, or modifications or extensions thereof, with DoD. Management's focus shifted immediately to cutting costs and increasing on-time deliveries. To implement this strategy, RRC's parent company and its leadership brought in new managers, including Dwyer, Kleiner, Reismiller and others, who would apply a manufacturing focus and subordinate the Quality Assurance department to the Operations department, which was in charge of the manufacturing process; all of which was done to increase profits by circumventing costly but crucial quality procedures set forth in RRC's QMS.

C. RRC's QMS

35. The QMS, *as written*, is consistent with the AS9100 requirements and creates the appearance that RRC is manufacturing its engines to the highest quality standards. For example, it sets out procedures for monitoring and testing the manufacturing process to demonstrate that products meet contract specifications, among others, see AS9100B, Sections 7.0, 8.0, and it requires that RRC establish and maintain records to demonstrate conformance with its QMS and

make such records available for review by customers and regulatory authorities. See AS9100B, Section 4.2.4.

36. In addition, the QMS contains several specific c*omponents* to be followed during the manufacturing process, from design and development through validation and verification. Each of these components is an AS9100 requirement.

37. Source and Method Change Procedures When RRC initiates or makes changes to a design, a manufacturing process or a supplier relationship, it must conduct thorough tests to ensure that the resultant product conforms to specifications. See AS9100, Sections 7.5, 8.2 and 8.3.

38. First/Last Article Inspections The first stage in the Source and Method Change Procedure is the "First Article Inspection." First Article Inspection (or "FAIR") is used to confirm that the manufacturing process is capable of producing engines that are within pre-established tolerances. A similar "Last Article Inspection" is required to be performed on the last component produced in a lot as a means to verify that the manufacturing process remained stable throughout the run. See AS9102, Section 3; see also AS9100, Section 8.2.4.2 (requiring First Article Inspections).

39. Component Proving The second stage of the Source and Method Change Procedure, called "Component Proving," is a random sampling process performed on products subsequent to the first article and before the end of the production run. Component Proving utilizes Statistical Process Control techniques to provide objective evidence as to whether the manufacturing process is stable and repeatable. See AS9100, Sections 8.1, 8.2 and 8.4.

40. Source and Receiving Inspections Items and raw materials received from outside suppliers must be inspected. RRC is required to confirm that all such materials and parts meet specifications. See AS9100 Section 7.4.

41. Design and Manufacturing Inspections. Each product must go through a design and development stage during which drawings, part lists, specifications and other documents are created. Outputs of the design and development process include the identification of key characteristics essential to safe and proper use; product acceptance criteria and tolerance levels relevant to functional and performance requirements; and specific information and instructions such as drawings, part lists, and detailed guidance concerning material, processes, manufacturing steps and assembly instructions. See AS9100B, Sections 7.3.4 - .6. The QMS calls for routine inspections during the manufacture process to confirm that the process conforms to these requirements and that the end products are within tolerances. See AS9100, Sections 7.1, 7.3 and 7.5 *et seq*.

42. Further, RRC must create and maintain documentation of design verification and validation, including records demonstrating that the product meets specifications. See AS9100B, Section 7.3.6.1-.2.

43. Quality Escape Investigations and Reporting. When RRC learns that defective or nonconforming products were shipped to customers despite the quality assurance procedures, the QMS obligates RRC to investigate the escape and report it to all customers who are potentially affected. See AS9100, Sections 5.6, 7.5.1.5 and 8.3. The purpose of these investigations is to determine the source of the defect or non-conformance, why it was not discovered prior to

shipping, and whether it may be present in other engines or parts shipped to customers. See AS9100, Section 8.5.2.

II. RRC Violates Inspection and Testing Requirements of the QMS and AS9100

44. RRC's decision to obtain AS 9100 certification was not driven by a genuine commitment to AS9100 quality standards. It was done purely for business reasons so that RRC could obtain new DoD contracts.

45. Indeed, RRC management's true view of quality requirements was made clear by Kleiner in May 2006, when he told McArtor, in an attempt to justify RRC's increasingly lax quality standards, that nobody in the industry adheres to "over-reaching inspection regimes," and that if RRC did so it would not be able to compete with its competitors.

46. While the managers touted the Rolls Royce brand's reputation for quality, its certification to higher-level quality requirements, and its QMS incorporating AS9100 standards in order to obtain contracts, RRC began knowingly and deliberately skipping required quality control steps within months of obtaining the certification. As a result RRC's actual practice not only violated the QMS and AS9100 requirements, they were proving to be grossly inadequate to assure conforming products. To put the scope of the non-compliance in perspective, since 2003, RRC's manufacturing process consistently produced over 1,000 defects per one million parts; the gold standard for manufacturing processes, known as "Six Sigma," allows for only 1.7-3.4 defects per one million. In addition, around 6% of parts produced by RRC's manufacturing process had to be scrapped, an astronomical figure reflective of the high rate of defects.

47. Many of RRC's "short cuts" involved eliminating expensive and time-consuming testing procedures. For example:

A. RRC ceased conducting Source and Method Change procedures

48. A properly functioning QMS would result in hundreds of First Article Inspection reports associated with a single engine model. First Article Inspections must be created for each part or design component used in the engine; each raw material item used in such parts or components; each special process or other crucial manufacturing step identified at the design stage; and updated First Article Inspections for each change to a part, process or raw material item. The parts manufactured and found conforming based on First Article Inspections would then be used in a First Article Assembly of the engine; and that engine would then be subject to First Article Performance Testing.

49. As of 2005 RRC had conducted only four First Article Inspections for the thousands of parts and engine components it had manufactured since 2002. It had also failed to comply with QMS requirements for supplier-provided parts, conducting First Article Inspections on outside supplies only 40% of the time. McArtor raised these non-compliances to Kleiner but Kleiner took no action to remedy the problem.

50. RRC's Major Quality Failure ("MQF") log, an internal document used to track material product defects and process failures, also demonstrates RRC's failure to conduct necessary First Article Inspections and Component Proving. For example, MQF No. 06M004, initiated in March 2006, reflects RRC's failure to follow Source and Method Change Procedures, including FAIR and Component Proving and MTRV testing. This MQF concerned production of the AE3007 engine, which is sold to DoD for use in the RQ-4A Global Hawk.

51. The drastic deviation from RRC's QMS described above – the failure to conduct Source and Method Change Procedures – is itself documented as a Major Quality Failure. On

March 25, 2004, MQF No. 04F010 was initiated concerning RRC's entire quality assurance process, across all engine families and models, to highlight recent quality control failures stemming from RRC's failure to provide resources to implement the Source and Method Change Procedures. This MQF was initiated after three earlier MQFs concerning omitted Source and Method Change Procedures in parts sold to DoD: MQF 04F001, MQF 04F004, and MQF 04F007.

B. RRC's other testing and inspection violations

52. In 2005, RRC further abandoned source and method change requirements. Dwyer's management team created an organization labeled "Cost Excellence" and staffed it with 30-40 engineers. The "Cost Excellence" team was instructed to make changes in all of RRC's processes, from design to manufacturing, in order to cut costs and manufacturing time. The Cost Excellence team made numerous changes. Hardly any of them, were subjected to QMS- and AS9100-required Source and Method Change Procedures, including First Articles Inspections and Component Proving. Engineers assigned to the "Cost Excellence" team complained to McArtor about pressure to eliminate critical steps from the design change process. When McArtor raised these concerns with Kleiner, he was told not to inform government authorities, despite his duties as the FAA's designated ODAR to report quality issues to the FAA.

53. By way of example, one of the "Cost Excellence" initiatives involved a development project with DoD known as the High Speed Turbine Engine Development Program, or HiSTED. MQF 06M017, initiated on September 27, 2006, documents RRC's failure to conduct QMS-required design analysis and design reviews.

53. Another cost reduction program implemented in 2005 was called "Project Evolution." The project required RRC to move and re-tool 41 of 51 manufacturing departments located in Plant 5, including the entire gear machining and heat treatment lines; to do so, RRC personnel had to disassemble and then reassemble the lines and make numerous modifications to the lines in the process. Under its QMS, these changes should have triggered First Article Inspections and Component Proving on nearly all of RRC's production engines and processes. Mike McKibbin ("McKibbin"), a senior operations manager responsible for Rolls Royce's Indianapolis facilities after completion of the new lines, reported to McArtor that RRC did not conduct Source and Method Change Procedures, including First Article Inspections, on any of the products made on the relocated lines. McKibbin told Operations managers that such inspections needed to be conducted after the move, but they were not done.

54. Since 2003, RRC routinely failed to conduct Machine Tool Routing Verifications ("MTRVs"), a QMS component required by AS9100B Sections 7.5.1.2 and 7.5.1.3. MTRVs are used to confirm the setup of machine tools when settings and tools are changed to manufacture different parts.

55. Since 2003, RRC violated its QMS by routinely failing to conduct manufacturing inspections and by ignoring evidence of out-of-tolerance parts. RRC used a practice called "buying off" defects. Under this procedure a manufacturing supervisor could decide that a part which is found to be outside of tolerances could, nevertheless, be used "as is" and thereby pass the part along to the next phase of manufacturing and for eventual sale to customers. This occurred most commonly by simply disregarding inspection results identifying defects and

destroying records reflecting such findings. The process for and results of the "buying off" procedure are discussed in greater detail in Section V of this Amended Complaint.

56. RRC also violated the quality control resources requirement of the QMS. See AS9100 5.0, 6.0. Almost immediately after DoD approved the QMS, RRC also took away the independence of the quality function by placing it within – and subordinate to – the Operations department, which is responsible for manufacturing. Thus, RRC's internal quality engineers and inspectors reported to Operations management instead of an independent Quality department.

57. The reorganization had a significant and deleterious impact on quality control. With different incentives than the Quality department, manufacturing engineers and supervisors pressured the quality inspectors not to interfere with production timeliness or to increase production expenses. Such pressure was effective because the quality inspectors now reported to managers in Operations.

58. Placing quality functions under Operations is highly unusual in the aerospace industry and among other complex industrial manufacturers. The inevitable deterioration of quality control practices was not a risk, but a goal. Indeed, by placing the Quality function under Operations, RRC management was able to prevent quality testing during the manufacturing process: Operations personnel skipped key quality inspections, manufacturing inspectors who could be pressured to ignore defects were placed at key stages of the manufacturing process, and inspectors destroyed records of defects.

59. RRC management also starved the quality function of resources to ensure that it could not properly oversee the manufacturing process.

a. RRC dramatically reduced the number of individuals working in the Receiving Inspection Department, which inspects materials and parts delivered by suppliers. Prior to the new management team's arrival, RRC employed a Receiving Inspection Manager, Receiving Inspection Quality Engineer and a group of receiving inspectors. By 2005, the total receiving inspection staff had been cut from approximately ten to two, limiting RRC's capacity to conduct receiving inspections.

b. RRC also took away the independence of supplier quality engineers conducting source inspections by causing them to report to the Procurement organization instead of the Supplier Quality department, and by limiting their travel to supplier sites to conduct on-site source inspections. As a result, the ability to assess and monitor supplier quality through source inspections was dramatically curtailed.

c. In 2006, RRC began eliminating quality inspectors – the union staff previously supervised by Quality Engineers – and delegated the inspection tasks directly to the manufacturing line staff and supervisors that reported to Operations management, including Gallo, the VP of Operations

59. By stripping quality engineers of their independence and starving them of resources, RRC management was engaged in a concerted effort to undermine the entire quality process. Not only was the failure to provide adequate resources for quality inspections a violation of RRC's QMS and AS9100 standards, the predictable and intentional deterioration of quality practices that resulted from these actions produced the numerous additional QMS and AS9100 violations discussed throughout the body of this Complaint.

III. RRC Violates the QMS and AS9100 By Concealing Quality Escapes

A. Background

60. Defects mounted due to RRC's cutbacks on QMS compliance. As a result, non-conforming and potentially dangerous products were delivered to customers, resulting in "quality escapes."

61. The term "quality escape" refers to instances in which a manufacturer ships products that do not conform to specifications or are otherwise defective. RRC typically learns of quality escapes from the Rolls Royce network of Authorized Maintenance Centers, which perform maintenance and repairs and report defects to RRC.

62. RRC has a contractual duty, incorporated through federal acquisition regulations and RRC's QMS, to report defects to DoD, and to notify DoD or its agents of defects in supplies that have previously been inspected. See 48 C.F.R. § 52.246-18(b)(4) and -19(b)(3) (requiring contractors notify DoD of defects in supplies or equipment that have been previously inspected); see also AS9100 Section 7.5.1.5 and 8.3 (requiring reporting of defects founds after delivery). Such contracts grant the government the right to require concessions, including field inspection campaigns, repair or replacement of nonconforming products, and/or financial compensation. See, e.g., 48 C.F.R. § 52.246-2(f); see also 48 C.F.R. § 52.246-3(f).

63. The QMS and AS9100 require RRC to investigate all quality escapes. The purpose of these investigations is to determine, *inter alia*, the source of the defect or non-conformance (such that the manufacturing problem can be identified and resolved for future production); the fix for the problem, if one is available; whether the quality escape might exist in other engines RRC delivered to customers; and why the defect or non-conformance was not

discovered prior to shipping (so that quality control procedures may be improved). See AS9100, Section 8.5.2.

64. If a quality escape investigation determines that the defect resulting in a quality escape may exist in other engines beyond the one that has been reported as defective, RRC must report the quality escape to the potentially affected owners. If the quality escape threatens to impair engine function, including engine life, then RRC must also ensure that repairs or other accommodations are made. Under RRC's contracts with DoD, quality escapes that threaten to impair engine function, including engine life, require repair or replacement or other remedies, all at RRC's expense. Even quality escapes which RRC determines will not harm engine function must be disclosed to the government for a possible "concession," or reimbursement in purchase price. See 48 C.F.R. § 52.246-18(c)(2).

65. Acting out of a misguided belief that RRC could judge which defects were serious enough to merit compliance and which were not, and wanting to minimize the expenses and reputational damage associated with quality escapes, RRC decided to cut corners. Its management initiated two new practices that concealed numerous quality escapes from government authorities.

66. First, in 2004, it began using a new practice called the Records-Only Material Review Board ("Records-Only MRB"). Pursuant to this practice, if management believes that an engine can operate as is despite the presence of a defect, they will designate the defect as a Record Only MRB and will not notify DoD or other customers with engines or parts likely to contain the same defect. This practice violates the QMS and AS9100 Sections 7.5.1.5 and 8.3.

67. Second, in 2005, RRC took the quality escape decision process away from the technical experts who usually conduct the investigations and placed it exclusively in the hands of high-level business managers. The new boards were called Product Problem Resolution ("PPR") teams.

68. In addition to violating the QMS, these two changes created fertile ground for abuse. By way of example, between January and September of 2006, RRC did not disclose a *single quality escape* to the FAA or DoD when, in fact, RRC learned during that period of 35 separate instances of quality escapes.

69. RRC's belief that it could accurately judge those defects which were serious enough to merit disclosure and which were not was both self-serving and inherently flawed. Aircraft engines are complex systems. Defects and non-conformities that appear innocuous in isolation can interact in unexpected ways, causing catastrophic results. Accordingly, the failure to disclose any quality escape can risk safety. For example, customers and maintenance providers rely on the disclosed configuration of the engine or part in use when they are deciding if an aircraft is safe to operate. Inevitably, flaws can develop through wear and tear, or a defect. When a mechanic observes such a flaw during preflight checks, s/he has to determine if the aircraft is still safe to operate. The mechanic will rely on the disclosed configuration in making that decision. However, the observed flaw may be potentiated by an undisclosed quality escape, meaning that the aircraft is in fact unsafe.

C. Concealment in Records-only MRBs

70. RRC uses Records-Only MRB when it unilaterally determines that an engine with a defect or nonconformity can operate "as is." It then creates an internal record of the

defect but does not inform customers, including the military, even when the same defect likely exists in engines or parts shipped to other customers. This is a direct violation of the QMS and AS9100, both of which require RRC to notify the customers of all quality escapes concerning engines it purchased and offer the government the opportunity to seek an accommodation, such as a replacement, repair, or financial concession. Indeed, AS9100 Section 8.3 forbids manufacturers from unilaterally deciding on dispositions of "use-as-is" for defects discovered after delivery.

71. As with any usurpation of authority, the Record Only MRB process is subject to abuse and RRC has, in fact, used the designation with reckless disregard for the actual operational issues presented by these defects. The following are some examples of RRC designating important quality escapes as Records Only MRB's and other instances in which it manipulated the quality control system to avoid informing customers of defective engines and parts:

a. In 2003, RRC management used the Records-Only MRB designation to allow AE 2100 engines used in the C130J Super Hercules transport to remain in the field without a recall even though the engines had thin wall casting and voids that could lead to cracks in the Prop Reduction Gearbox. This issue had been logged as a Major Quality Failure ("MQF") but RRC did not take steps to prevent the appearance of this defect in production engines delivered to the military. RRC did not notify customers or government authorities of this defect.

b. Also in 2004, several T56 engines, which are used in the military's C130 Hercules, P3 Orion and E2 Hawkeye aircraft, suffered engine failures in the field due to a defective welding process on a component called the "Lighthouse." This issue had been

previously identified and logged in RRC's MQF Log on December 16, 2003 and assigned to Reismiller, the Director of Operations responsible for Quality. See MQF No. 04F003. That the effected engines continued in use demonstrates the dangers of RRC's failure to inform its customers about the quality escapes.

c. In 2005, McArtor learned from Robin Elisabeth Parsley, the Product Reliability Engineer who normally led quality escape investigations for the Model 250 engine, that RRC had delivered to customers a large number of Model 250 engine turbine shafts (used on the Kiowa Warrior and MH-6 Little Bird helicopters) with "Case on Core" conditions that weaken the shaft. These conditions occurred because of a defect in the copper plate process intended to protect portions of the component during heat treating, which caused parts of the shafts to be exposed to extreme temperatures during manufacture. Despite numerous reports of quality escapes and a determination that the defects resulted from systemic production problems, RRC used the Records-Only MRB designation and did not report this serious engine problem to purchasers of the product, including the government.

d. Splines (*i.e.*, grooves or threading that allow different parts to fit together) on a large number of Model 250 engine turbine shafts were defective. These conditions occurred because the machine that made the splines was improperly maintained, causing fretting to occur. RRC did not notify customers or government authorities of this defect.

e. In 2005, RRC management learned that titanium compressor wheels used in the AE1107, AE2100 and AE3007 engines were damaged because they were cleaned with the wrong solution. However, RRC did not issue a recall or inform customers. The affected engines are used in the V22 Osprey, the RQ-4 Global Hawk, and the C130J Super Hercules transport.

D. Concealment through PPR Teams

72. Prior to 2005, RRC's quality escape investigations proceeded according to the process required in the QMS by assembling a Customer Issues Team ("CIT") for each instance. CITs included customer liaisons in the customer-facing business unit, the ODAR Coordinator, technical experts, and employees from procurement, engineering and manufacturing.

73. The ODAR Coordinator is an employee of RRC, but reports directly to the FAA; in effect, the ODAR Coordinator is responsible for monitoring quality control procedures within RRC and providing compliance information to the FAA. Accordingly, the ODAR Coordinator plays a crucial role in quality escape investigations. From 2002 until he was placed on administrative leave in September 2006, McArtor served as RRC's ODAR Coordinator.

74. Kleiner replaced CITs with the PPR process in 2005. The purpose and effect of this change was to reduce the number of individuals that knew about quality escapes, concentrate that knowledge among high-level executives and, in violation of the QMS, conceal the large number of quality escapes that RRC was experiencing due to its other quality assurance violations. In particular, Kleiner discontinued the ODAR Coordinator's participation in quality escape investigations. McArtor was thus dependent on Kleiner for information about quality escapes.

75. Throughout the first half of 2006, Kleiner failed to report any quality escapes to McArtor. Finding this odd, McArtor told Kleiner in May 2006 that it was unusual that there had been no quality escapes for McArtor to disclose to the government so far in 2006. Kleiner told McArtor that indeed there were no issues, and that he would let McArtor know if any quality

escapes arose. In August 2006, McArtor again asked Kleiner about quality escapes and was told that there were none.

76. At that time, McArtor went to David Fetsko ("Fetsko"), the Director of Product Quality. Fetsko revealed that RRC learned of 35 quality escapes in 2006. None of those 35 escapes had been disclosed to the government, and in every case either no investigation had been conducted or investigations had stalled and were left in an "open" status, precluding any conclusions concerning flight safety issues or corrective action.

E. The Major Quality Failure Log

77. RRC's disregard for quality control requirements resulted in numerous Major Quality Failures ("MQFs"). The following are examples from the MQF Log for the period from 2003 to September 2006:

a. Model 250 engine component with torn splines (MQF Log 02F019);

b. T56 engine diffusser with defective aerodynamic characteristics (MQF Log 03F013);

c. AE2100 engine torquemeter defects (MQF Log 03F020);

d. T56 engine parts that were missing cooling holes (MQF Log 03F024);

e. T56 critical engine component heat treat process was changed without conducting required Request for Engineering Source Approval (RESA) qualification tests, part of the Source and Method Change Procedure (MQF Log 04F001);

f. Part in Liftfan engine in Joint Strike Fighter produced using wrong material (MQF Log 04F004);

g. Model 250 and T56 engine parts with raw material defects due to processing errors (MQF Log 04F007);

h. T56 engine turbine wheels with cracks due to new supplier's heat treat process using unapproved "water quench" that did not meet specifications (MQF Log 04F021);

i. AE2100 engine gears with defective root radii (MQF Log 04F025);

j. Seven AE3007 engines created smoke in the cabin due to failure to follow gated design review procedures causing interference between the front sump and other parts of the engine; and faulty assembly processes that resulted in defective O-ring and carbon seal installations (MQF Log 05F005, 05F006 and 05F014).

78. The Liftfan, AE1107 and T56 engines are all used exclusively in military aircraft sold to the United States government. RRC's other engines – the AE3007, AE 2100, and Model 250 – are used in both military and commercial aircraft. These "dual-use" engines, that is, engine models sold for commercial and military use, as well as the military-only engines, are manufactured exclusively in RRC's Indianapolis plant.

79. While engines for military use may have some unique design specifications, commercial and military engines of the same model contain the same common core (including the same parts), and are built using the same equipment, manufacturing lines, machine tools, and suppliers. Indeed, most parts are not designated for use in military or civilian aircraft at the time they are manufactured; such designation is usually made only when the parts are taken from the storage facility for engine assembly.

80. In addition, the QMS governs all engines RRC produces, both military and commercial, and deviations from RRC's QMS detailed above were not applied to only

commercial or only military engines; the deviations impacted all engine models manufactured at the RRC Indianapolis plant.

81. A number of RRC's engine models used in military aircraft are certified by the FAA. This certification relies on RRC's submission of, and compliance with, its QMS, as well as certificates applicable to design, manufacture and airworthiness. See 48 CFR § 246.408-71(a). For engines sold to DoD that are FAA-certified, maintaining FAA certification is a requirement for retaining DoD contracts for such engines. See 48 CFR § 246.408-71(c); DFARS 246.408-71.

82. As discussed above, the military provides minimal information concerning military aircraft accidents, there have been at least nine non-combat accidents since 2002 involving the failure of RRC engines in military aircraft, resulting in at least five fatalities of American military personnel. With regard to commercial aircraft, the NTSB investigates each crash or accident and, when an incident is determined to have resulted from a defect in the aircraft rather than pilot error, the FAA will normally issue an Airworthiness Directive to identify the failure and provide information concerning its impact and scope. Since 2002, RRC dual-use engines, used in military aircraft as discussed above, have been the subject of 63 NTSB investigations and have been the subject of 16 different FAA Airworthiness Directives.

IV. RRC Misleads AS9100 Inspectors and DoD to obtain Re-Certification

81. In response to the 2004 T56 engine failures discussed above, DoD required RRC to obtain a third-party certification that its QMS and its quality practices met the AS9100 standards in order to keep its existing contracts and to obtain new ones. RRC hired the

Performance Review Institute ("PRI"), a third-party auditing firm authorized to grant AS9100 certifications, to conduct the review.

82. Kleiner led RRC's re-certification team. He and other responsible RRC managers were well aware of RRC's failure to comply with its QMS, and the numerous resulting defects and non-conformities. Nevertheless, RRC provided the main PRI auditor with copies of its QMS, and represented that it was acting in compliance with it. Kleiner and other RRC managers did not disclose the numerous cost-cutting measures that contravened the QMS. Indeed, RRC management concealed RRC's actual quality control practices, which they knew did not comply with the QMS or the vast majority of AS9100 requirements.

83. RRC's most significant noncompliances included the following sections of AS9100B:

- 4 (Quality Management System)

  4.2.3 Control of Documents
  4.2.4 Control of Records
  4.3 Configuration Management (Ref ISO 10007)

- 5 (Management Responsibility)

  5.1 Management Commitment
  5.3 Quality Policy
  5.4.2 Quality Management System Planning
  5.5 Responsibility, Authority and Communication
  5.6 Management Review

- 6 (Resource Management)

  6.1 Provisions of Resources
  6.2 Human Resources

- 7 (Product Realization)

  7.1 Planning of Product Realization

7.2.2 Review of Requirements Related to the Product
7.3.4 Design and Development Review
7.3.5 Design and Development Verification
7.3.6 Design and Development Validation
7.3.7 Control of Design and Development Changes
7.4.1 Purchasing Process
7.4.2 Purchasing Information
7.4.3 Verification of Purchased Products
7.5.1 Control of Production and Service Provision
7.5.1.1 Production Documentation
7.5.1.2 Control of Production Process Changes
7.5.1.3 Control of Production Equipment, Tools and Numerical Control (NC) Machine Programs
7.5.1.5 Control of Service Operations
7.5.2 Validation of Processes for Production and Service Provision
7.5.3 Identification and Traceability
7.5.5 Preservation of Product
7.6 Control of Monitoring and Measuring Devices

- 8 (Measurement, Analysis and Improvement)

8.1 General
8.2.2 Internal Audit
8.2.3 Monitoring and Measurement of Processes
8.2.4 Monitoring and Measurement of Product
8.2.4.1 Inspection Documentation
8.2.4.2 First Article Inspection (Ref AS9102)
8.3 Control of Nonconforming Products
8.4 Analysis of Data
8.5.2 Corrective Action
8.5.2 Preventive Action

84. AS auditors only spot-check compliance with the written Quality Management System. They rely in large part on truthful answers and complete document disclosures to make the certification decision. Knowing this, Kleiner and other top managers deliberately provided the PRI auditor with only limited documentation, thereby concealing evidence RRC was required to disclose that would have shown that it was not complying with its QMS.

85. For example, RRC concealed a 2004 internal audit report which documented that RRC had not been conducting First Article Inspections and that its Source and Method Change Procedures were ineffective. RRC also failed to disclose information concerning numerous Major Quality Failures and quality escapes that had occurred since 2002. RRC was required to voluntarily disclose all such information to the PRI auditor.

86. In November 2005, McArtor told Kleiner that RRC was required to disclose the foregoing information to PRI. Kleiner refused to make the disclosures and threatened McArtor that he or anyone else who informed the PRI auditors of quality problems would face severe disciplinary action.

87. As a result of RRC's concealment efforts, the PRI auditor did not discover most of the violations and granted AS9100 certification.

88. After RRC's fraudulently obtained recertification at the end of 2005, PRI was scheduled to return in mid-October 2006 to ensure continued compliance. Kleiner placed McArtor on administrative leave on September 27, 2006, just weeks before PRI's return visit.

V. Additional Fraud By Destruction and Falsification of Required Records/Knowing Use of Non-conforming Parts

A. Violation of requirements for the use of non-conforming parts

89. The QMS, consistent with AS9100 and standard industry practices, expressly forbids the use of parts that are believed to be nonconforming in products sold to customers, unless the parts have been properly dispositioned by an authorized Material Review Board. Even when the MRB determines that a part is useable "as is," the non-conformity must be disclosed to the customer for a possible concession. See AS9100, Section 8.3. In addition,

RRC's QMS and AS9100 certification require that steps be taken to prevent the unintended use or delivery of nonconforming goods. Id.

90. RRC routinely used parts known to be non-compliant. The Major Quality Failure Log details numerous instances in which defective and/or uninspected parts were used to build production engines delivered to DoD and other customers. Specific examples include the following:

a. MQF 03F002 and 03F003: in AE3007 engines, Full Authority Digital Engine Controls ("FADECs") clearly marked for use in testing only, known as non-production slave units, were installed and shipped as production-quality FADECs.

b. MQF 03F030: in Model 250 engines, 1st stage turbine wheels identified as defective and subject to open Material Review Board process were shipped to customers.

c. MQF 04F006: in AE3007 engines, defective front frame stud that was determined to require financial concession had been shipped to customer.

d. MQF 04F011: T56 bearings were put into RRC's inventory for use in production engines after they were rejected as non-conforming upon receipt from the supplier.

e. MQF 04F013: in AE1107, AE2100 and AE3007 engines, parts that were non-traceable, *i.e.*, that could not be traced back to the raw materials and production processes used to manufacture them, and thus non-conforming, should have been scrapped but were instead shipped to customers.

f. MQF 04F018 and 04F019: in AE3007 engines, FADECs designated for testing use only were installed on production engines without MRB approval.

g. MQF 04F024: in Model 250 engines, instances of part number 23031922 with dimensional deviations identified during manufacturing inspections – and which were thus defective – were nonetheless shipped to customers; the use of such parts was discovered when the parts were found to be "missing" from the storage area for such defective parts.

h. MQF 04F033: in AE3007 engines, CVG lever arms identified as non-conforming were accepted for use in production engines.

91. The use of non-conforming parts was condoned and, often, directed by management as a means to achieve on-time deliveries. For example, in late 2006, RRC management decided to ship several civilian and military aircraft engines despite the fact that they contained compressor blades designated as "scrap, for experimental use only" because the blades had failed to meet specifications.

92. RRC management decided to ship the engines and receive credit for making its delivery on schedule, and then issue service bulletins later. Shortly before he was placed on administrative leave in September 2006, McArtor was informed of the scheme by Chris Shefler, an RRC engineer serving as the FAA Designated Engineering Representative.

B. Falsification and Destruction of the Documents Demonstrating Non-compliance/"Buying Off" the Defects

93. Under the QMS, the FAR/DFARS, and AS9100, RRC was required to document its quality control compliance with accurate records and to make those records available to the government. For example, FAR 52.246-2(b), incorporated into the DoD contracts, states as follows:

> The Contractor shall provide and maintain an inspection system acceptable to the Government covering supplies under this contract and shall tender to the Government for acceptance only supplies that have been inspected in

> accordance with the inspection system and have been found by the Contractor to be in conformity with contract requirements. As part of the system, the Contractor shall prepare records evidencing all inspections made under the system and the outcome. These records shall be kept complete and made available to the Government during contract performance and for as long afterwards as the contract requires.

48 C.F.R. § 52.246-2(b); FAR 52.246-2.

94. In addition, some contracts included express language requiring RRC to maintain quality processes to ensure non-conforming parts were not used in engines sold to DoD. For example, Contract No. N00019-03-C-0355, issued by the Naval Air Systems Command and dated July 17, 2003, states that RRC, "shall have a corrective action and disposition system for non-conforming material" in accordance with Higher-level Contract Quality Requirements.

95. To conceal that it was not complying with the quality control requirements, RRC often resorted to falsifying and destroying documents that would otherwise have revealed its non-compliance.

96. When parts were found to have defects, RRC also regularly created false records so that the parts could be treated as conforming and continue through the manufacturing process for sale to customers. This occurred most commonly by a supervisor deciding to disregard inspection results identifying defects and by destroying the records reflecting the findings.

97. For example, a common inspection step in manufacturing nearly all engines parts involves use of a Coordinate Measuring Machine ("CMM"). At this step, a part or component in production is placed in a CMM machine to obtain precise measurements to determine whether the dimensions are within accepted tolerance levels. The CMM machine creates a report of the part's exact measurement as compared to the defined tolerance levels.

98. The QMS and DoD contracts, require RRC to respond with corrective actions when the CMM Report shows that a part is outside acceptable tolerance levels, and to initiate an MRB process to determine the proper disposition of the defective part (*e.g.*, use as is, repair, or scrap).

99. Despite these requirements, the costs of which increased with the number of defects, RRC adopted a practice whereby it allowed manufacturing engineers to skip the MRB process and unilaterally decide that non-conforming parts could be used as is, a practice commonly referred to at RRC as "buying off" the defect.

100. RRC's practice of "buying off" defective parts is an egregious violation of the QMS and AS9100 requirements. Tolerance levels are set by design engineers, not manufacturing engineers, based on the criticality of the parts and their functions. Design engineers have special expertise to choose the stringency of the tolerances, and possess a far more expansive knowledge base about the engine than manufacturing engineers.

101. The practice of allowing manufacturing engineers to essentially override the design engineers and move out-of-tolerance parts through the manufacturing process is reckless and violates the QMS.

102. To make matter worse, by 2006 RRC had begun eliminating quality inspectors – the union staff previously supervised by Quality Engineers – and delegated the inspection tasks directly to the manufacturing line staff and supervisors that reported to Operations management, including Gallo, the VP of Operations. For example, each operating business unit, or department, Ramsey worked in originally had four or five Quality Engineers. By the time of his firing in March 2006, he was the only Quality Engineer, and he was responsible for overseeing

the quality process across an entire operating business unit, which included five different cells, or work areas.

103. The transfer of the inspection duties to line staff made it easier for Operations supervisors to move parts through the manufacturing process without regard to quality requirements. For example, in September 2006, RRC Inspection Supervisor Tim Cavender reported to Quality Assurance that manufacturing line "inspectors" were refusing to identify defective compressor wheels because of pressure from manufacturing supervisors and Operations management.

104. In addition, Operations supervisors under Gallo instructed their staff to destroy records, thereby directly violating the QMS and contractual requirements.

105. For example, inspectors conducting the CMM process were instructed by their manufacturing supervisors to destroy all CMM Reports once parts advanced to the next operation step. This was done to conceal the fact that parts had been identified as non-conforming, and thus defective, during the CMM inspection, but were nevertheless bought off and allowed to continue through the manufacturing process.

VI. **Retaliation Against McArtor for Raising Concerns About QMS Failures**

106. Following Kleiner's replacement of the CITs with PPRs, and the exclusion of the ODAR from access to information about quality escapes, McArtor began raising concerns that RRC was concealing information which had to be disclosed to the government. He addressed this and other issues of non-compliance both orally and in writing, to RRC management, including Kleiner, the Human Resources department, and others.

A. Threats and adverse employment actions

107. Kleiner initially responded that he would ensure that the failures to follow the QMS would be remedied. However, Kleiner took no actions to remedy the problems. When McArtor's concerns were not addressed, he presented his concerns to Kathy Eldridge ("Eldridge"), from the FAA's Manufacturing Inspection District Office. As ODAR Coordinator, his contact at the FAA was Eldridge.

108. Kleiner directed McArtor to only express his concerns orally, and warned him that creating documentation of his concerns would amount to insubordination. McArtor would not accede to these directions, and instead sent a number of emails to RRC managers documenting the ongoing QMS violations in the hope that RRC would remedy the problems.

109. Kleiner removed McArtor from several of his duties in monitoring quality control failures and told McArtor that he would inform him if any issues arose that required disclosure to the FAA.

110. In May and August 2006, McArtor asked Kleiner if there had been any quality escapes in 2006 and Kleiner told him there had not. McArtor then spoke to Fetsko, the new Director of Product Quality for verification of Kleiner's representation. From Fetsko, who was responsible for managing the new PPR process that had replaced the CIT process previously used to investigate quality escapes, McArtor learned that RRC had received notice of 35 quality escapes as of August 2006. None of these had been reported to FAA or to DoD.

111. Upon learning of this lapse, McArtor recommended that Kleiner invoke a temporary stop shipment on engines manufactured at the Indianapolis plant pending a) the completion of containment actions to determine if any engine preparing for shipment contained

the same defects, and b) a determination if any of the 35 quality escape investigations included issues that were determined to be flight safety issues.

112. Kleiner sent McArtor an email rejecting his recommendation. As a result, McArtor was obligated as the ODAR Coordinator to disclose the failure of the PPR process, along with his concerns regarding the inspection program, to the FAA and to the DCMA, which he did on September 22 and 25, 2006.

113. In September 2006, Mr. McArtor also initiated an internal ethics investigation into RRC's failure to manufacture conforming products and failure to follow its QMS.

114. On or about September 27, 2006, within days of McArtor's complaints and when it became clear that he was informing the federal government about RRC's fraud, RRC placed him on administrative leave. Reflecting RRC's disinterest in addressing the problems McArtor raised, it put Kleiner in charge of key aspects of the ethics investigation even though many of McArtor's concerns stemmed from Kleiner's conduct and instruction.

115. A follow-up inspection by the PRI auditors assessing compliance with AS9100 standards was scheduled to occur approximately two weeks after McArtor was placed on administrative leave. Kleiner knew that McArtor would have provided PRI with evidence of numerous instances, discussed above, in which RRC failed to adhere to its QMS and AS9100 requirements.

B. Defendant's anti-whistleblower culture

116. The retaliation against McArtor was part of a pattern and practice of retaliatory conduct by RRC toward employees who raised quality concerns.

117. Ramsey also suffered retaliation for raising concerns about RRC's violations of its QMC. In 2004, Ramsey informed Reismiller of quality control violations stemming from RRC's failure to segregate defective and nonconforming parts and equipment. Nothing was done to rectify the problem. Instead Reismiller threatened Ramsey's job and told him that further efforts to identify and escalate quality issues would be detrimental to his career.

118. Ramsey informed Deborah True, the VP of Quality at the time, of Reismiller's threats and his fear of retaliation; she assured Ramsey that he would not be retaliated against. However, True left RRC in or around May 2005 – she was replaced as Vice President of Quality by Kleiner – and within a year Ramsey was fired by James Leonard, who worked directly under Reismiller.

119. In 2004, Sally Randall, the former Director of Quality, raised concerns about RRC's failure to adhere to its Source and Method Change Procedure, as well as repeated instances in which defective parts were used in equipment later delivered to customers. Randall also attempted to stop a common practice in which, prior to visits by external auditors, including PRI auditors assessing compliance with AS9100 standards, Operations staff removed defective parts from the storage and segregation area for nonconforming parts. RRC took no remedial action in response to Randall's concerns, as reflected by the numerous MQF log entries since her complaints concerning failures to follow Source and Method Change procedures and the use of defective, non-conforming or "scrap" material in products delivered to customers. Shortly after Randall raised her concerns, she was transferred and stripped of her quality control responsibilities.

120. RRC engaged in similar retaliatory treatment of a number of other quality employees who raised concerns about RRC's quality practices. Individuals who lost their jobs shortly after raising such concerns included, among others, Larry Miller, an internal auditor, and David Talcott, a Senior Quality Engineer, as well as Loren Horn and Tim Proctor, quality engineers responsible for conducting receiving inspections.

VII. RRC's False Claims

A. Fraudulent inducement of contracts

121. Relators incorporate the foregoing paragraphs as if fully set forth herein.

122. Available data demonstrates that from 2003 to 2006, since the time that RRC began using actual practices that violate the QMS in 2002, RRC sought and obtained approximately 180 DoD contracts, or modifications or extensions thereof. Those contracts incorporate the QMS as a material term. RRC did not intend to comply with the approved QMS when it entered into these contracts. The following are examples:

123. Contract No. DAAH23-03-D-0045 was issued by the US Army Aviation & Missile Command and administered by the DCMA. It is dated December 19, 2002. This is a five-year fixed-price contract for Model 250-30C engines and engine containers for the US Army's OH58 Kiowa Warrior helicopters. The contract clause entitled "Inspection and Acceptance," at page 21, expressly incorporates FAR regulations 252.246-2 and -4, which require RRC to provide and maintain a quality and inspection system, discussed above, as well as FAR 52.246-11, which requires compliance with Higher-level Contract Quality Requirements.

124. Contract No. N00019-03-C-0355 was issued by the Naval Air Systems Command and administered by the DCMA. It is dated July 17, 2003. This is a $2,672,000 contract for T-

56 turboprop engines for the Navy's E2 Hawkeye aircraft. Clause F-4 of the contract expressly incorporates FAR regulations 252.246-2 and -4, which require RRC to provide and maintain a quality and inspection system, discussed above, and requires compliance with Higher-level Contract Quality Requirements.

125. Contract No. N00019-04-C-0093 was issued by the Naval Air Systems Command and administered by the DCMA's Air Propulsion Operations. It is dated August 19, 2005. This is a $2.5 billion contract to design and develop the engine propulsion system for the F-35 Joint Strike Fighter. Section F of the contract, entitled "Inspection and Acceptance," at page 8, expressly incorporates FAR regulations 252.246-3 and -5, which require RRC to provide and maintain a quality and inspection system, discussed above, as well as FAR 52.246-11, which requires compliance with Higher-level Contract Quality Requirements .

126. In entering into contracts that contained material terms that RRC did not intend to follow, RRC violated 31 U.S.C. § 3729 (a)(1)(A-B). Also, each claim for payment submitted under the fraudulently induced contracts constitutes a separate false claim subjecting RRC to a penalty.

B. Fraudulent Concealment of Quality Escapes

127. Through use of the Records Only MRB designation and PPR teams, RRC deliberately concealed quality escapes from DoD. It took these measures in order to avoid its obligation to pay the government accommodations and to provide replacements. RRC made false statements regarding the quality escapes, *inter alia*, by documenting the quality escapes in the Records Only MRB books, rather than in the documents required by the QMS and to which the government auditors had access.

128. The Records Only MRB documentation was kept in the Operations department instead of in the customer facing business unit, which is where records related to service issues, defects, quality escapes, and potential customer accommodations are normally kept, and where RRC knew the government and external auditors would expect to find such records.

129. RRC further concealed quality escapes from the government by adopting the PPR teams which excluded the ODAR. The PPR process was designed to allow senior management to exercise control over quality escape investigations by limiting access to information about quality escapes to Dwyer, Kleiner and a few other senior executives, and deliberately failing to conduct and delaying the conclusion of quality escape investigations. RRC, acting through Kleiner, made affirmative misrepresentations about the quality escapes to McArtor, who as ODAR Coordinator was responsible for reporting defects to the FAA.

130. RRC also concealed quality escapes information by failing to disclose it during the regular meetings between DoD/DCMA and Defense North America, the RRC customer-facing business unit that manages most contracts with DoD. These meetings to review RRC's performance on DoD contracts, known as program review meetings, were attended by RRC managers including Kleiner and David Becker, the Head of Defense Quality, among others. During the meetings, RRC is expected to provide a complete review of contract performance, including pertinent issues such as defects, quality escapes, and accident/incident investigations, as well as information concerning any changes to RRC's QMS. It is common practice, and expected, that quality escapes potentially impacting DoD engines are to be disclosed in these meetings. By participating in the meetings and omitting information about the quality escapes, RRC falsely represented to DoD officials that no defects or quality escapes existed.

131. By each of the above, RRC violated 31 U.S.C. § 3729 (a)(1)(G).

C. False Certificates of Conformance

132. For each product RRC provides to the United States military, it must certify that the product was produced in accordance with all contractual requirements, including RRC's QMS. This is a condition precedent to shipping the product and demanding payment. This requirement is reflected in the Certification of Conformance which RRC provided to the United States for each aircraft engine and part it sold:

> I certify that on _____ [date], RRC furnished the supplies or services called for by Contract No. _____. . . in accordance with all applicable requirements. I further certify that the supplies or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical identification (part number), and are in the quantity shown on this or on the attached acceptance document.

FAR 52.246-15(d).

133. By violating the Inspection and Testing Requirements, by using the Record Only MRB and PPR system, by failing to follow the requirements for the use of non-conforming parts, and by falsifying and destroying required records, all as alleged above, RRC violated multiple components of the QMS as well as basic quality assurance procedures in the aerospace industry, including the AS9100 and ISO9001 standards, that are incorporated into its QMS and DoD contracts.

D. Fraudulent Inducement of Contracts Following the 2005 Recertification

134. As set out above, DoD required RRC to recertify under AS9100 in order to keep its then-current contracts and to obtain additional contracts that required the higher quality

standards. RRC misled the PRI auditor conducting the certification review and thereby caused PRI to issue the recertification when, in fact, RRC was materially non-compliant.

135. DoD contracts with RRC for the production of military aircraft engines were conditioned upon RRC's adherence to its QMS. See, e.g., 48 C.F.R. §§ 52.246-2(b), 3(b), 4(b) and 5(b) ("The Contractor shall provide and maintain an inspection system acceptable to the Government. . . ."). RRC represented that its QMS met the AS9100 standards and that it adhered to the QMS.

136. In addition, many of RRC's DoD contracts incorporate FAR 52.246-11, which requires compliance with Higher-level Contract Quality Requirements such as the AS9100 standard.

137. By then obtaining AS9100 certification from PRI, albeit fraudulently, to satisfy DoD that RRC's QMS constituted an acceptable quality system, RRC represented to the government that its practices were in conformance with AS9100 standards.

138. As a result, all contracts RRC entered into with DoD since the AS9100 certification in 2005 were fraudulently induced in violation of 31 U.S.C. § 3729 (a)(1)(A-B). Moreover, RRC was able to retain its existing contracts, and continue to bill DoD under them, only as a result of this same fraud on PRI. Accordingly, the subsequent claims for payment under both sets of contracts are also false claims in violation of 31 U.S.C. § 3729 (a)(1)(A-B).

COUNT I -- 31 U.S.C. §§ 3729 (a)(1)(A-B,G)

139. Relators incorporate each paragraph of this Complaint as if fully set forth herein.

140. As explained above, RRC knowingly presented false or fraudulent claims for payment to the government by fraudulently inducing it to enter into contracts and to accept and pay for products supplied under the contracts while RRC was in material breach.

141. As explained above, RRC knowingly made and used false records and statements material to the government's decision to award it contracts and to make payments under those contracts.

142. As explained above, RRC knowingly made and used false and/or fraudulent statements to conceal its obligations to pay money to the government as a result of quality escapes and non-conforming products.

143. RRC is liable in this action for treble the amounts it claimed and/or concealed, together with a penalty of $10,000 (as adjusted for inflation per the Federal Civil Penalties Inflation Adjustment Act of 1990).

WHEREFORE, Relators Thomas McArtor and Keith Ramsey respectfully demand:

A. Judgment in favor of the themselves and the United States of America and against RRC in the amount of $11,000 for each false claim and false statement that RRC submitted to DoD together with treble the amount of payment received and/or costs avoided;

B. Judgment awarding Relators 30% of any recovery;

C. Judgment awarding the costs and reasonable attorneys fees incurred in prosecuting this action; and

D. Any other relief to which they may appear entitled.

COUNT II: RETALIATORY DISCHARGE
VIOLATIONS OF 31 U.S.C. § 3730(h)

144. Relator McArtor incorporates each paragraph of this Complaint as if fully set forth herein.

145. Because of his lawful acts to stop RRC from defrauding the government as alleged herein, RRC retaliated against Relator McArtor in the terms and conditions of his employment and eventually fired him.

146. Under 31 U.S.C. § 3730(h), RRC is liable to McArtor for two (2) times his back pay plus interest and special damages, including but not limited to attorneys' fees and litigation costs.

WHEREFORE, Relator McArtor respectfully demands:

A. Judgment in favor of himself and against Defendant Rolls Royce Corporation, awarding two times his back pay, plus special damages;

B. Judgment awarding the costs and reasonable attorneys fees incurred in prosecuting this action; and

C. Any other relief to which he may appear entitled.

COUNT III: RETALIATORY DISCHARGE
UNDER INDIANA COMMON LAW

147. Relator McArtor incorporates each paragraph of this Complaint as if fully set forth herein.

148. By all of the above, RRC's retaliated against McArtor for his lawful and protected conduct. RRC's conduct was not the result of mistake of fact or law, honest error of judgment,

over-zealousness, mere negligence, or any other such noniniquitous human failing. Rather, RRC's retaliatory conduct was malicious, wanton and in bad faith.

149. RRC is liable to McArtor for actual and punitive damages for this misconduct.

WHEREFORE, Relator McArtor respectfully demands:

A. Judgment in favor of himself and against Defendant Rolls Royce Corporation, awarding actual, special and punitive damages;

B. Judgment awarding the costs and reasonable attorneys fees incurred in prosecuting this action; and

C. Any other relief to which he may appear entitled.

JURY DEMAND

The United States of America on relation to Thomas McArtor and Keith Ramsey hereby demand trial by jury on all issues so triable.

UNITED STATES OF AMERICA *ex rel.*
THOMAS McARTOR and KEITH RAMSEY

By: _____/s/ Richard A. Waples_____
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